

REMARKS

In the above-identified Office Action the examiner rejected claims 1-8 under 35 USC 102(b) as being anticipated by US Patent No. 5,540,987 to Mudge, et al. ("Mudge") or US Patent No. 5,415,926 to Leighton, et al. ("Leighton").

Claims 1-4 are directed to a process for preparing an aqueous emulsion polymer. Claims 5-8 are directed to a process for reducing the residual ethylenically unsaturated monomer content of an aqueous emulsion polymer.

REJECTION OF CLAIMS 1-8 UNDER 35 USC 102(b)

The examiner rejected claims 1-8 under 35 USC 102(b) as being anticipated by Mudge or Leighton because each discloses preparing aqueous emulsion polymers from ethylenically unsaturated monomers in the presence of redox systems comprising a t-alkyl hydroperoxide("t-alkyl HP") and a "non-formaldehyde-forming" reducing agent. Mudge and Leighton, in pertinent part, present the same disclosure and will be addressed together. Mudge and Leighton each disclose a redox initiator system for certain emulsion polymerizations including a hydrophobic hydroperoxide(HP) and ascorbic acid or isoascorbic acid (a non-formaldehyde-forming reducing agent).

Mudge's and Leighton's hydrophobic hydroperoxide is disclosed to "include, for example, t-Bu HP, t-amyl HP, cumene HP, and the like. Of the hydrophobic HPs, t-Bu is preferred." Each of the examples of Mudge and Leighton includes only t-Bu HP.

Applicants claim a method, in an emulsion polymerization, using a redox initiator system consisting essentially of t-alkyl HP, t-alkyl peroxide, or t-alkyl perester wherein the t-alkyl group includes at least 5 Carbon atoms and a non-formaldehyde-forming reducing agent. Applicants' Samples 1-3 each used t-amyl HP with various reducing agents while applicants' Comparative Examples A-D each used t-Bu HP with various reducing agents. The results from the Samples of the invention are unexpectedly

superior to the corresponding Comparative Samples. The performance of t-amylHP is not only unexpectedly superior to that of t-BuHP, given the apparent chemical similarity of the two compounds, but further, the difference is one of pertinent kind rather than one of mere extent, in that the longer t-alkyl groups preferentially undergo beta scission, in the case of t-amyl HP to generate from the first-formed t-amyloxy radical, ethyl radicals. In contrast t-Bu HP forms t-butoxy radicals which are capable of forming formaldehyde in aqueous systems. Therefore, the selection of t-alkyl HP, t-alkyl peroxide, or t-alkyl perester wherein the t-alkyl group includes at least 5 Carbon atoms as oxidant is material to providing minimum formaldehyde levels as sought by applicants and is a different invention from that disclosed in most of Mudge's or Leighton's list of oxidants..

Applicants respectfully submit that their claimed subject matter is not disclosed in Mudge or Leighton with "sufficient specificity" to constitute an anticipation. Applicants respectfully urge that their invention of claims 1-8 is not anticipated under 35 USC 102(b) by Mudge or Leighton. Applicants request the examiner to withdraw his rejections over Mudge and Leighton.

Applicants respectfully request the examiner to pass their claims 1-8 to allowance at this time. Applicants' agent is available in order to expedite the allowance of this case at 215-641-7822 or by FAX at 215-619-1918.

Respectfully Submitted,



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